Missouri Botanical Garden

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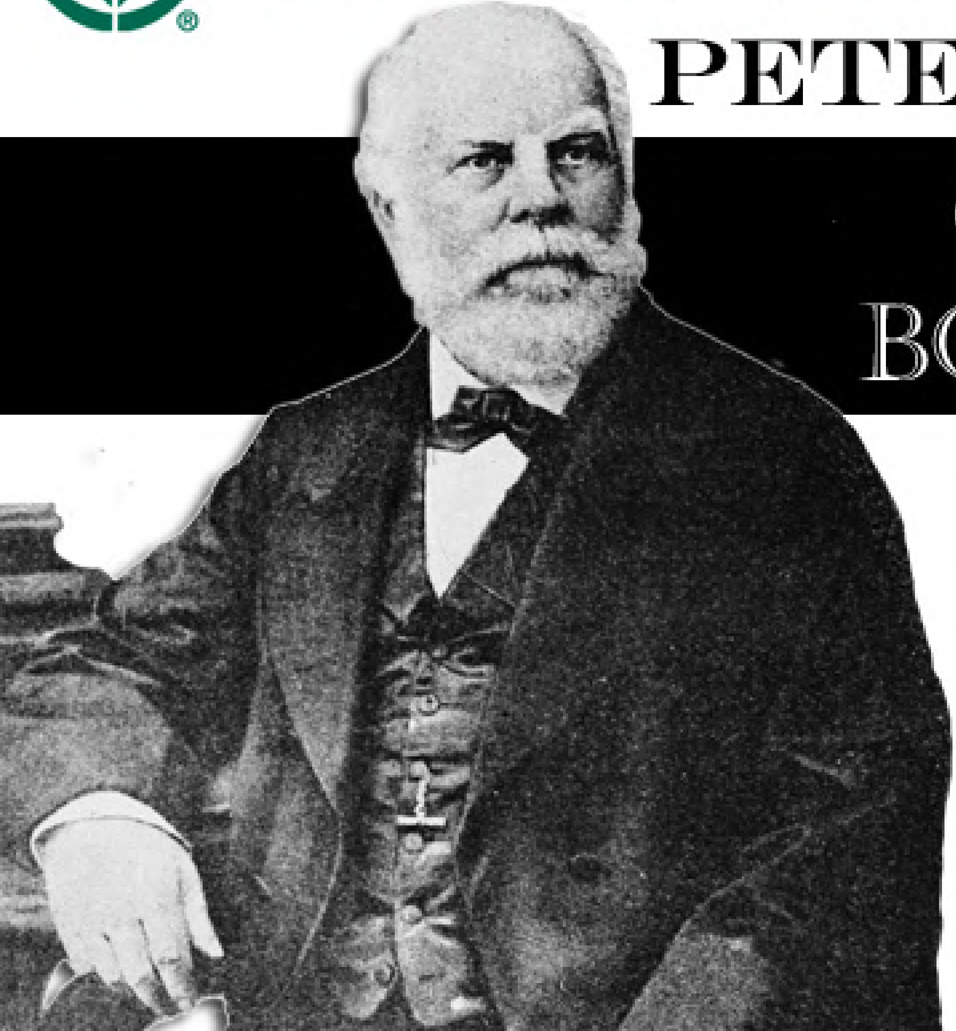

GEORGE ENGELMANN BOTANICAL NOTEBOOKS

Pagination Note:
Since many of the items lack a specific page number, the page number displayed online refers to the sequentially created number each item was given upon cataloging the materials.

1443
1450
1376

461-525

Western Oaks

chrys Town. Ln.

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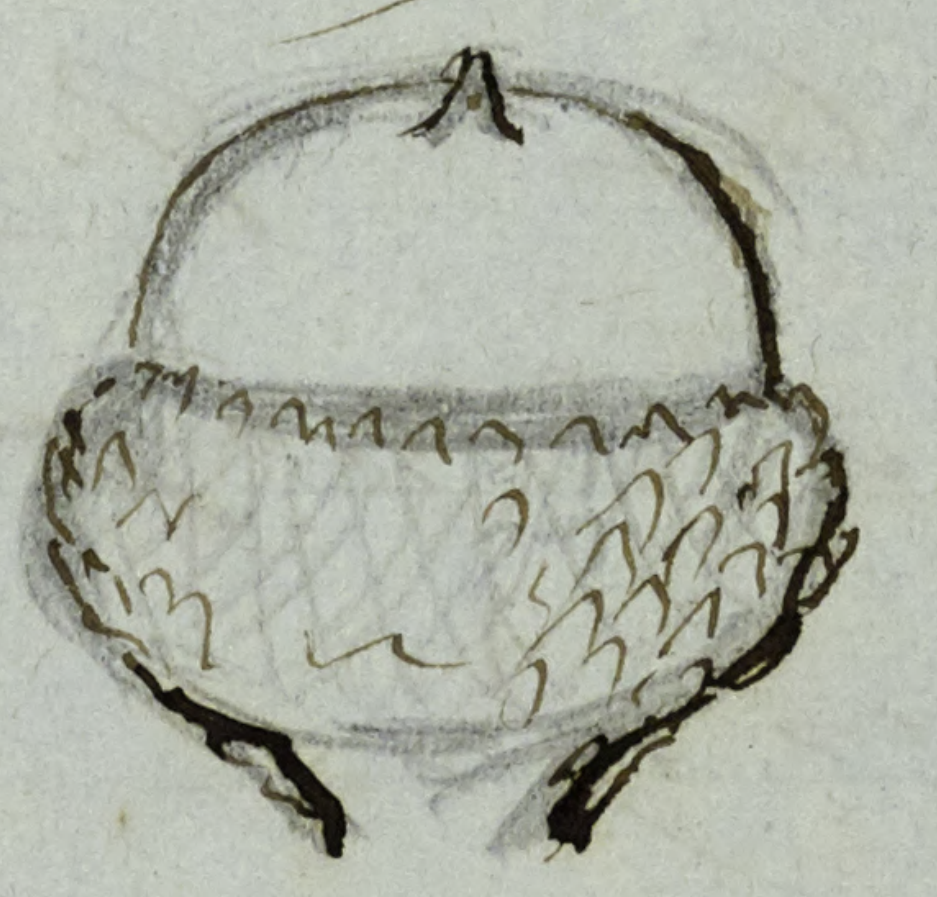
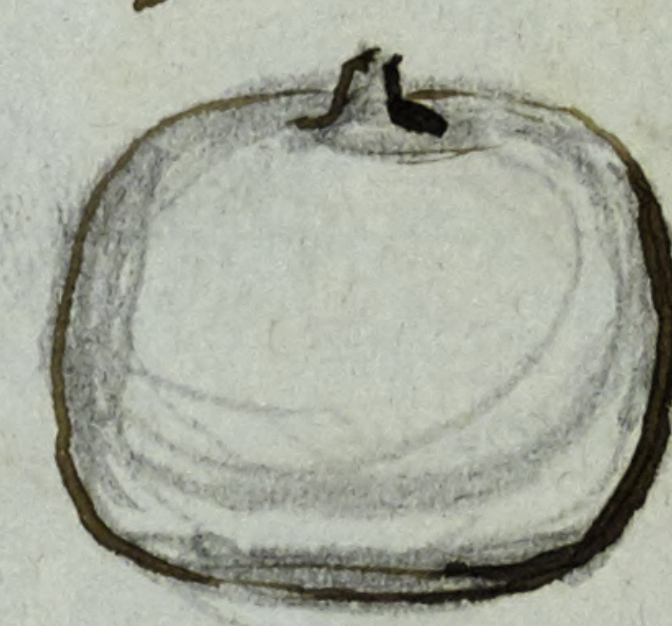
Quercus

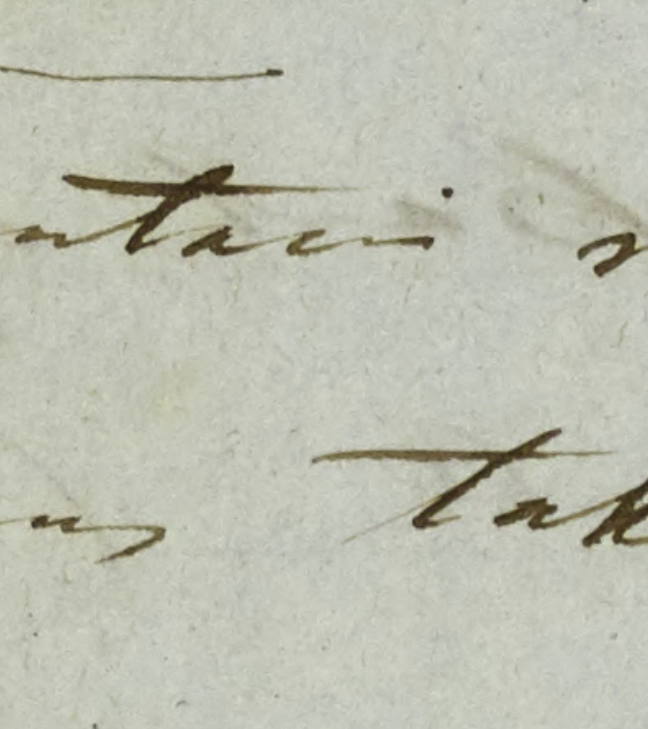
Q. coccinea on seventh street, small tree, vigorous shoots with almost entire, more dentate than lobed leaves — flowering branches with much lobed leaves; red now (20th Octob 1848) cups hemispherical, somewhat turbinate at base, scales distinct, somewhat loose, — Acorn depressed globose (not „somewhat elongated" Michaux or „ovoid-globose" Gray) and inside yellow! (which "of the colour of the egg" Michaux says is only the black oak while the scarlet oak is white!) —

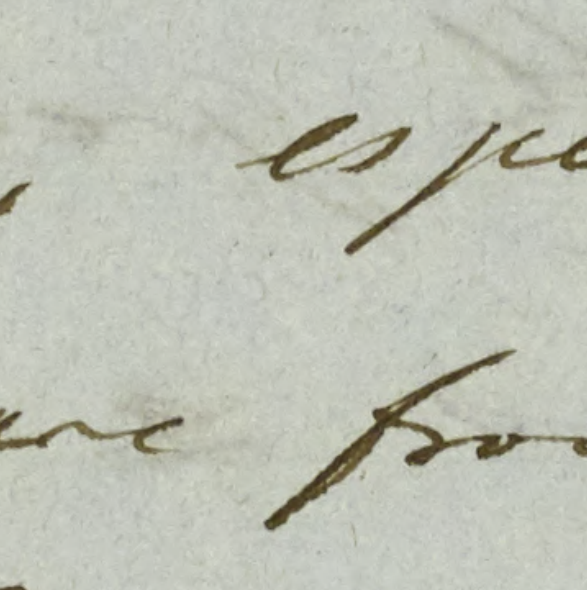


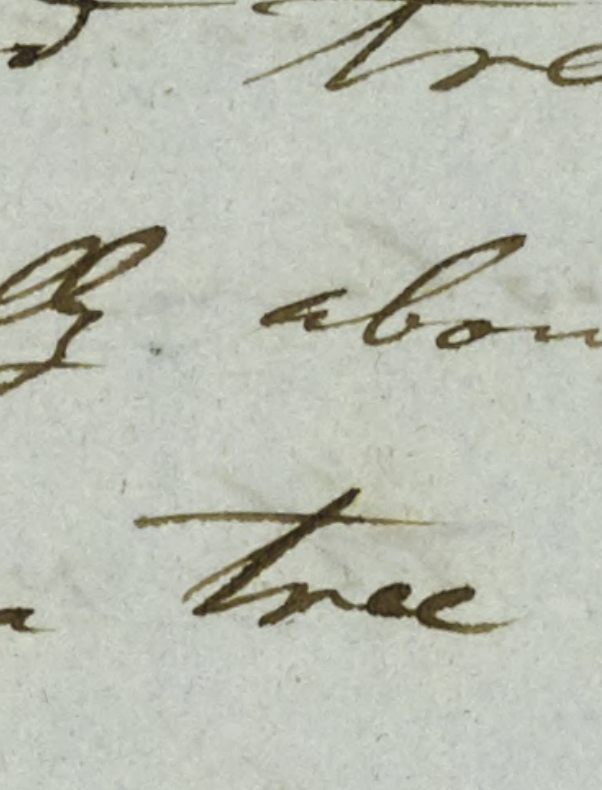


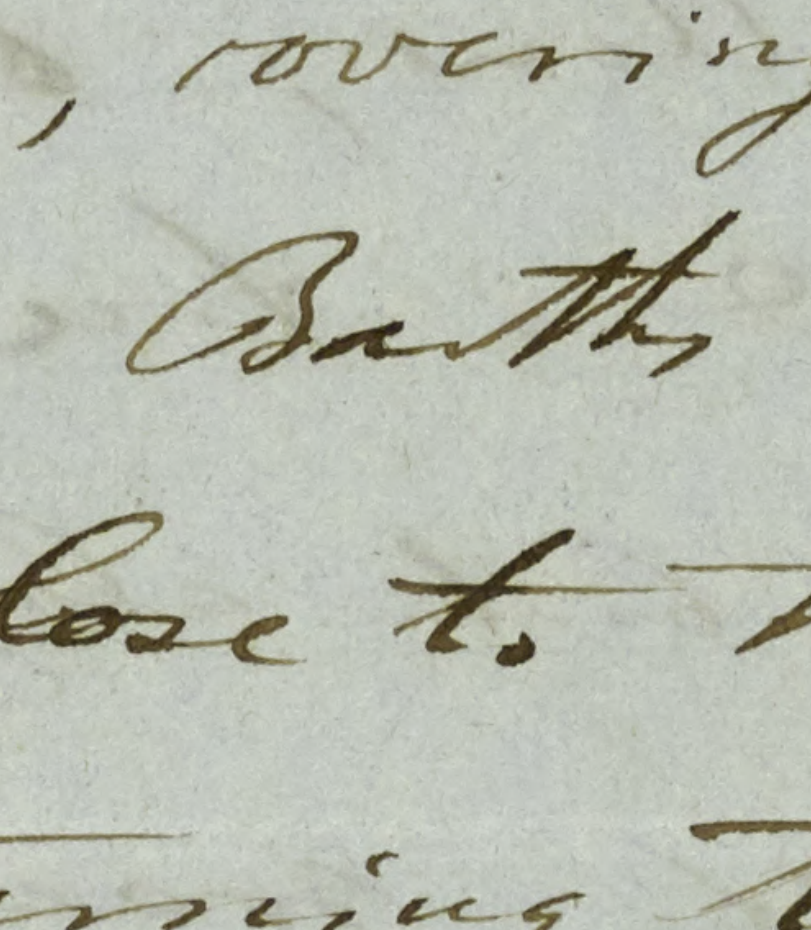
exact size.

Q. ~~nigra~~ tinctoria ? middle sized trees, covering the hills west of the Bellefontaine road, especially about Barths new house. The Specimens taken are from a tree close to the S. E corner of the house. — Leaves green, turning to yellow and brown, not a tinge of red — but of all shapes, some deeply cut, pinnatifid, others more entire, mostly very large. Petioles of the same proportion as in Q. coccinea, long. — Cups hemispherical much more turbinate at base, scales more distinct, looser, larger. — Acorn globose, or depressed globose or ovate, on the whole smaller than in the above specimen of Q. coccinea, inside whitish or pale yellow. and apparently paler in the ovate more yellow in the globose fruits; But Not one of the thousands of trees growing there shows a ~~more~~ different cup — from that figured above, nor has one red leaves!!









Octob 22nd 1848

Octob. 24 1848. In different directions about town; Northwest and Southwest. — General results of observations:

Of all the oaks the most beautiful colour is furnished by Q. alba, the richest red, with bluish purple on the originally glaucous lower side — next comes Q. nigra, though some trees are more brown, and others again on the same locality and the same appearance, are still green, turning to buff and brown. — Next comes in beauty Q. coccinea. or the similar Q. tinctoria which last is red only rarely (I distinguish now both trees only by the shape of the leaves.). — The broader and larger leaved Q. tinctoria is rarely red, mostly yellowish brown, the smaller and finer leaved Q. coccinea is more frequently red, not so yellow, but more brown or bronze if not red. — I found a tree where the greater part of the leaf was red, but along the veins ~~a~~ small (1–2 lines wide) streaks of green! —— So much about colour.

I find all the fruits of all the trees seen by me to day like those of №2 pag 1. I have seen not one like №1 though many trees which I had to take for Q. coccinea.. — —

The woods are gorgeous just now.

Eugen Hilgard writes that in the yard of his father's farm (Belleville) Q. tinctoria is found in very different forms, with sinuate pinnatifid or quite otherwise lobed leaves; the former have longer setose mucrones, and generally more ~~acute~~ oval acorns; bark ~~lighter~~ darker! coloured, blackish. — Oaks with blunter less lobed leaves, globose, obtuse fruit, lighter even somewhat reddish bark!! — Both forms vary, there are intermediate trees, which can not be classed with either — All of them are yellow and brown in fall; none red!

Quercus undulata in Herb Gray 1877

1. Gambelii
Fendler 809. 806 810^{b} Santa Fe
S. Watson 1086. Wasatch Mountains & American Fork Cañon
South Utah Wheeler 1872

2 Gunnisonii Cochatopa Pass, Gunnison No 47.
Utah Wheeler
Colorado Hall & Harbour 515. 1862
—— Canby 1871 — Greene 1873. — Lesquereux 1872
South Utah Mrs A P Thompson.

3 Jamesii
~~664 Wright West Texas 1849 (pungens Liebm!) squamis cupulae vix tomentis~~
808 810. 805 Fendler, Santa Fe
Cañon, Greene No 29

4 breviloba Fendler N Mex. 807

5 pungens
664 Wright West Texas 1849. (pungens Liebm!) squamis cupulae vix tomentis
1868 Wright

6 grisea 1866 Wright 1851
Arizona Wheeler 1871
664 Wrights 1849 Liebms type of grisea

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6353

Parlat. l. c. 492.

Mexico, Ehrenberg and others; Coulter 1419; Saltillo, Gregg 432, a shrub, 10 feet high. — Well distinguished by its slender branchlets and acute, mostly somewhat spreading leaves.

5. J. occidentalis, Hook. A shrub or mostly a small tree (in Oregon of the largest dimensions) with shreddy bark and pale reddish yellow wood; closely appressed leaves in 3s or often in pairs, obtuse or acutish, delicately fringed on the edges; anther-scales obtusish or short-cuspidate; berries 4–5 lines in diameter, with 1 or more seeds. — Hook. Fl. Bor. Am. 2. 166 (1840); Parl. l. c. 489.

Var. α. pleiosperma with straighter, stouter branchlets, leaves almost always in 3s; berries larger (4–5 lines diam.) very resinous, deep black-blue, with 2–3 much grooved seeds. — J. excelsa Pursh Fl. 2. 647, not M. Bieb. J. Andina, Nutt. Sylv. 3. 95 t. 110. ~~J. Cerrosianus, Kellogg, Pr. Calif. Acad. 2. 37 fide spec.~~

Oregon to the higher Mountains of California, in the north sometimes a large tree (Lewis, Douglas, Newberry), generally smaller or bushy; without fruit not always easily distinguished from J. Californica which Parlatore unites with it; the margin of the leaf especially is much like that of var. Utahensis, but the fruit is very distinct.

var. β. monosperma, a shrub or small tree, often with excentric layers of wood (Cañon City, Colorado) of scraggy growth ~~diffuse~~ with short ~~tortuous~~ branchlets at right angles; leaves as often in twos as in threes; berries smaller, with ~~leaves as often in 2s as in 3s~~ 2 or more commonly only ~~one + seed~~, 1 less grooved seed; ~~I found the berries in Colorado~~

From ~~southern Colorado~~ the Pike's Peak region of Colorado through west Texas and New Mexico to Arizona and California, where var. α. takes its place. — In Colorado the berries are often copper coloured, as Parlatore describes those of the species, and in some trees

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Quercus densiflora Hook Bolander; in fl June 28th; Young shoots & leaves well developed, bearing ~~in~~ each axil ~~erect~~ male aments, only the uppermost have several fertile fl. at base of ament.
Young fruit of last year at top of last years axis

1450 fruit fallen & cups remaining very silky inside

819 in flower

1449 before flowering — leaves dentate mostly, much thinner and less strongly and more distantly ribbed than usual

1779 before flowering — young fruit of last year forming.

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Q. densiflora

1449 Trinity Mtns Sept (scales scarcely reflexed! 50-60' high

4779 Bolander!

819 Sta Cruz Mts Aug 8. 1-2' thick 80' high

1450 Trinity Mts Sept Shrub 3-8' acorn bitter

1443 Mt Shasta base Sept bush acorns

1420 Sept? Shasta Sept. Castanopsis chrysophylla

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teeth on the margin is not an unalterable character, not any more than the ~~decurrent~~ cartilaginous margin decurrent from the terminal spine. The presence of a trunk, the proportions of the leaf (in A rigida and all its varieties the length equals 12-14 times the width) probably ~~perhaps~~, the form of the terminal spine, the character of the inflorescence and above all the form and proportions of the flower and its parts remain constant, and perhaps also the proliferous character of the inflorescence of some species.

15 Agave Palmeri, n. sp.; acaulis; foliis lanceolatis sursum attenuatis in spinam gracilem teretem ultra medium canaliculatam excurrentibus, margine aculeis inaequalibus saepius recurvis flexuosisve atro fuscis dentato; florum albidorum pedicellis bracteis abbreviatis carnosis fultis; ovario perigonio aequali seu paulo longiore, tubo lobis vix longiore stamina longe exserta medio vel paulo supra gerente; capsula prismatica brevi-cuspidata in stipitem contracta, seminibus minoribus minute verruculosis.

In the mountains of southern Arizona Dr Schott collected the flowers 1855; 1869 Dr E. Palmer, who during 10 years has made Arizona and the adjacent regions the field of his explorations, and for whose services to botany in that district this species is named, gathered more complete specimens and seeds; and last year, 1874, Dr Rothrock of Lieut. Wheeler's

6355

Q Wislizeni

Bolander Anderson Valley Jun 28

243 Mt Diablo Sept 25 to San Gabriel deep rich ever green foliage
R43
from San Gabriel to this place ?

6062.3.4 Bolander no date peculiar Jun
more deeply lobed & broader leaved [illegible] fr

6650 fl. & old leaves

(1314 [illegible], near Berkeley valley June ?

1286 Pachero Pass June 20 large tree tree 40' ~~[illegible]~~ agrifolia! 11 feet circumf. 50–60' high – low branching bark rough & dark – bright foliage contrasts with the blue of Douglasii)

1091 should be No 1091 bark like alba! tree 1' diam Mt Diablo

1092 " 1092 tree

1472 Common on foothills north Table mountain at Oroville

1473 * same locality Sept or Oct 18' diam

Bolander Anderson Valley

1488 San Quentin Nov 18

1090 Shrubby (agrifolia) Wisliz May 14 3–10' high Mt Diablo

137 Santa Anna Mts Jan. 12–18'

~~1320~~ 1330 1330 3–5' high end of August — Shasta shrub

1467 ~~Batt~~ Creek summit of Crater Sept or Oct 3–8' dwarf 3–5'

1317 * Rockville Aug 6 (Shasta)

473 Santa Lucia Mts April

Shrubby, small leaved

1271 Cañada del Puerto Jun 11 4–6 feet high

* very like agrifolia in habit; bark the colour of agrifolia; leaves less concave more dark green – one, 7 miles north of Marysville 18' circumf. branched at 4 or 5 feet – bark dark

6356

in Yucatan and left us accounts of it, the former in Senate Doc. 300, Washington, March 12th 1838, the latter in the report of the Agricultural Department at Washington for 1869. Both agree that there is a common native species in Yucatan, called Chelem by the aboriginal inhabitants, but from time immemorial a number of varieties, all characterized by much longer leaves, and one also by the absence of (spines marginal), and differing among themselves in the quantity and quality of their fibre, have been cultivated by the natives of Yucatan, and are a staple product of that country to this day, furnishing the well known Sisal hemp. The people know them as Jenequen (Schott) or Henequen (Perrine) and distinguish, ~~as Dr Schott reports~~, the Yaxci (Yashki) as furnishing the best quality, and the Sacci (Saqui) with the largest quantity of fibre; Chucumci, is larger than the last, and produces coarser fibre; Babci has fine fibre but in smaller quantity; Citamci with small narrow leaves and poor fibre stands probably nearest to the wild plant. Dr Perrine mentiones another variety, Istle, evidently the Ixtli of Karwinski, as furnishing a fine fibre, called Pita. These plants yield a return of leaves when 4 or 5 years old, and may last, under proper management, 50 or 60 years; the flowering scape ~~must be~~ is cut off ~~when~~ as soon as 4 feet high, when, evidently axillary branches continue the growth of the plant, which is thus kept so long alive by being ~~kept~~ prevented from flowering.

The trunk of the wild plant of Yucatan is 1-2 feet high, leaves 1½-2 feet long and as many inches wide, contracted ~~above~~ the broader base and widest about the middle; lateral teeth ¾ or even 1 inch apart, mostly straight, from a broad base 1-2 lines long, rath

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Q. agrifolia
256 Carpenteria March
1488 San Quentin Nov
128 San Gabriel Jan
1474 Oakland Oct.
~~1317 Rockville Aug 6~~ wish!
1029 M Diablo May 12
1271 parvifolia villos with young & old leaves 4-6' June 11 Cañada del Puerto
1473 Santa Lucia ~~Wislizenii~~ Miller April 22
1314 Rockville July 23 not ~~Catal~~ imported young fruit and quite mature leaf ~~June 26~~!
6055 — fl
2730 — fl
12 Palmer with young and older fruit

Monte Diablo in May 1862 Brewer: finest Q. agrifolia seen 16 7/4 feet circumference (other 21 feet) head of dense foliage 120' diameter

Jun 19. 1862 now putting forth a second growth (no (more) additional rings of wood seen for this second growth

July 23 no 1314 1/2 ~~feet~~ diam. 40' high, bark light ash gray, ~~rather~~ smooth
A

not expressly mention a channeled terminal spine.
Agave Sisalana is the name that Dr Perrine
gave to the plant known to the natives of Yucatan

6357

in diameter, straight, or often somewhat twisted, terete, scooped out at base, but not channeled, dark red-brown, a dark corneous margin extending down the leaf-edge for several inches and bearing the uppermost teeth. Scape 12–15 feet high; flowers pale yellowish green, 2¼–2½ inches long; ~~stamens~~ perigon 16, tube 6 or 7, lobes 9–10 lines long; stamens inserted about the middle of the tube, bloodred upwards", 1 inch longer than the perigon, v; style x anthers 10–10½ lines long as last as long as stamens.

A. Ixtli, which 1872 flowered in the gardens of the late Mr Thuret at Antibes, is entirely similar, flowers of the same dimensions, anthers a little larger (11½ l. long); capsules, which grow with the bulbs on the same panicle, oval, over 2 inches long, 1¼ wide, very short stipitate; seed uncommonly large, 4½ lines high, with a ventral hilum x ~~while~~ (in many other Agaves I find ~~it~~ the hilum v more basal, a character, which may be of some value). I believe this is the first time that the flowers of the Ixtli have been described; ~~which~~ they identify the plant ~~as~~ with the old A. rigida. A. Karwinskii, Zucc. is probably the same thing.

With ~~By~~ the name of longifolia I designate the variety, known as Sacci, in Yucatan; it is principally and extensively cultivated, distinguished by its much longer (4–5½ feet long x spiny leaves, 3–4½ inches wide; flowers very similar to those of the wild plant but filaments greenish. A. fourcroides, Jacobi, Ag. 107 probably belongs here, and A. elongata Jacobi ib. 108. I would also refer to this form, if the description did

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Q. Sonomensis

Bolander   Anderson Valley   June

Kellogg

759 San Juan July 8   not seen farther South

971 Sonoma April 18

947 Marin City April 5

6057

Into Oregon, (Cañon of the Klamath

high up the Mountains in the Sierra   north to South as *Yaxci*, ~~as~~ the most valuable of the fibre-producing Agaves and which was introduced by him into South Florida some 35 or 40 years ago, during his efforts to acclimatize commercially valuable tropical plants in that almost tropical portion of our territory, efforts which were aided by Congress by a large grant of land, but which were destroyed together with his own life during the subsequent Indian wars. With this Agave, however, he has been successful, as it is now fully naturalized and is quite abundant at Key West and the adjacent coast. Dr Parry found it there in full bloom in Febr 1871 and gives the following description of it: Trunk short, leaves pale green but not glaucous, 4–6 feet long, 4–6 inches wide, generally smooth-edged, but here and there bearing a few unequal, sometimes very stout and sharp teeth, terminal spine stout, purplish-black, often twisted; scape 20 or 25 feet high, panicle 8 feet long and half as wide; one of the largest plants examined had ~~pau~~ 35 branches in the panicle, the largest, near the middle, 2 feet long, upper and lower ones shorter. The flowers are slightly larger than those described, with a shorter thicker ~~stouter~~ ovary, stamens inserted a little higher up in the tube; the plants bore no fruit but produced an abundance of buds by which they propagate themselves, and from which this interesting form has been multiplied in this country and in Europe.

If this plant is, as is most probable, only a cultivated variety of *A. rigida* it is of the greatest importance for the study and the understanding of the

My Herbarium Aug. 1877

obscura decidua
Quercus undulata Torrey, "Jamesii"

Colorado Dr James leaf of the original specimens from Torrey Herb.
Brandegee, Cañon leaves partly green till April
Engelm " fruit Sept 1874
New Mexico Fendler 808 "undulata var pedunculata" DC Prod.
" 805 "undulata" DC Prod. fl.
" Dr Palmer fl.
West Texas. Pecos, Buckley under the name of Q. Vaseyi Mss fr.

Var ~~obtusi~~ brevi-loba
Q. obtusifolia var breviloba Torrey Bot Bound.

New Mexico, Fendler 807 "undulata var obtusifolia" DC Prod
Texas Wright 1848 on the Blanco
Bigelow Howard Springs (Torrey's Type!)
Murray's Exp. Red River (fragment of the Torr fragt of the Torr
Drummond 340 & 341 & leaf ex Hb Gray 342 is Q. Drummondii = Gambelii Lieb.
Buckley "Q. Durandii" Buckley. fr. (Agric Dep
E Hall " "
Buckley "Q. San Sabeana" Buckley (Agric. Dep
Colorado, Cañon, Engelm

6359

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My Herbarium Aug 1877

Quercus undulata

subsp. pallida subpersistens

pungens (called of the Torreyi)

west Texas, Wright 664 (pungens Liebm.!) 2 specimens (fragments ex Hb Torr)

N Mexico Bigelow (fragment ex Hb Torrey)

Emory – (fragm. fr. ex Hb Torr)

Colorado Cañon – Greene – fl 1873

— Pagosa — Brandegee – fr. 1874

Utah Dr Parry, near Washington 1874 fl.

Dr Palmer Mt Trumbull 1877 fl

Arizona, Dr Bigelow Cooks Springs 1851 ex Hb Torrey fragm. fl.

Dr Palmer Fort Whipple 1865 fl.

Capt Smith fl. fragm. ex Hb Torr.

Lieut Wheeler 1871 fragment

Wright 1868 " (berberidifolia Liebm !!)

Dr Palmer 1870 – fr. in abundance

California Dr Parry 1876 Desert fl

Dr Palmer 1875 No 29 Tantillas Valley fr.

in

grisea

west Texas? Wright 665 Q. grisea Liebm.! fragment ex Hb Torr

" " 1866 young fruit

1867 " approaching oblong. fol.

Arizona G K Gilbert branchlet

Lieut Wheeler fragment with fruit

Dr Palmer 1870 – fr.

Dr Girard 1874 fr.

Dr Rothrock

grandifolia

Colorado Brandegee 1877 past flowering

Arizona Dr Palmer 1865 " "

Calif. Desert Greene 1877 leaves persist. reticulate both sides, ~~less~~
upper th on lower side

6360